

L 46987-66 EWP(k)/EWT(m)/EWP(t)/ETI IJP(c) JH/JD

ACC NR: AT6024910

(A, N)

SOURCE CODE: UR/2981/66/003/004/0026/0031.

AUTHOR: Grushko, O. Ye.; Zal'tsman, I. Ya.; Vinokurov, N. D.; Semenov, A. Ye.;
Zasyarkin, V. A.; Kryukov, M. A.; Yevstyugin, A. P.; Bozhenok, I. V.

ORG: none

40
13+1

TITLE: Process of casting VAD23-alloy ingots

SOURCE: Alyuminiyevyye splavy, no. 4, 1966. Zharoprochnyye i vysokoprochnyye splavy
(Heat resistant and high-strength alloys), 26-31

TOPIC TAGS: metal casting, lithium containing alloy, aluminum alloy, copper containing alloy, VAD23 aluminum alloy

ABSTRACT: In elaborating a process for casting ingots from VAD23 alloy by the continuous method, the authors studied the casting properties (tendency to form hot and cold cracks) of this alloy, established the temperature conditions of the casting, and determined the methods of protecting the metal during transit from the mixer to the crystallizer and in the crystallizer. The chemical activity of lithium, which enters into the composition of the alloy, made it necessary to protect the alloy surface during transit. Two methods were tested for this purpose, involving the use of (1) sulfur dioxide and (2) a flux consisting of a eutectic mixture of lithium and potassium chlorides. Only the latter method gave satisfactory results. A temperature of 700-730 °C was found to be optimal for casting. The quality of the ingots obtained was thoroughly

Card 1/2

L 46966-66 EWT(m)/EWP(w)/T/EWP(t)/ETI IJP(c) JD/W/JG/JH
ACC NR: AT6024926 (A,N) SOURCE CODE: UR/2981/66/000/004/0170/0174

AUTHOR: Semenov, A. Ye.; Novikov, I. I.; Zolotarevskiy, V. S.; Mamin, A. S.

ORG: none

TITLE: Effect of manganese and zirconium on the hot cracking of alloys of the Al-Mg-Zn system

SOURCE: Alyuminiyevyye splavy, no. 4, 1966. Zharoprochnyye i vysokoprochnyye splavy
(Heat resistant and high-strength alloys), 170-174

TOPIC TAGS: manganese containing alloy, zirconium containing alloy, aluminum zinc alloy, magnesium containing alloy, brittleness

ABSTRACT: The object of the work was to determine the effect of Mn and Zr on the hot cracking of alloys of the Al-Mg-Zn system containing various Mg/Zn ratios. The introduction of Mn into the alloys was found to cause a substantial increase in their hot cracking because of an expansion of the temperature range of brittleness, a decrease of the elongation per unit length, and an increase in linear shrinkage. Addition of 0.12-0.25% Zr to alloys of aluminum with magnesium, zinc, and manganese increases their resistance to the formation of crystallization cracks because of a narrowing of the brittleness range and an increase in elongation per unit length in this range. It is recommended that a high Zr content be used in the filler wire in welding Al-Mg-Zn-type alloys, and that the Mn content of these alloys be maintained close to the

Card 1/2

L 46966-66

ACC NR: AT6024926

lower limit given by the technical specifications, providing that the corrosion resistance of the welded specimens is checked. However, the introduction of Zr in amounts of no more than 0.15-0.17% is associated with the separation of intermetallic phases during the crystallization, and these phases not only decrease the plasticity of the cast and deformed material, but also raise the thermal stresses of a welded structure. Orig. art. has: 2 figures and 1 table.

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 005/ OTH REF: 001

Card 2/2 vmb

L 46772-66 EWP(m)/T/EWP(t)/ETI TJP(c) JH/WW/JD/JG

ACC NR: AT6024943 (A,N)

SOURCE CODE: UR/2981/66/000/004/0291/0295

AUTHOR: Zasytkin, V. A.; Semenov, A. Ye.

ORG: none

TITLE: Behavior of dissolved gases during crystallization of aluminum alloys

SOURCE: Alyuminiyevyye splavy, no. 4, 1966. Zharoprochnyye i vysokoprochnyye splavy (Heat resistant and high-strength alloys), 291-295

TOPIC TAGS: aluminum alloy property, hydrogen, metal crystallization

ABSTRACT: A comparative study of the gas saturation of AMg6, V93, V95, and other alloys in ingot or liquid form showed that hydrogen is almost completely retained in the metal during crystallization, even though no macroporosity was observed in the structure of the ingots. Apparently, all of the hydrogen is present in a supersaturated solution. The amount of retained gas depends mainly on the crystallization rate, nature of the alloy, initial gas saturation and other factors. It was found that in AMg6, AK6, V93, V95, AL19, D16 and other alloys, as the gas content increases within a certain range, the thickness of the grain boundaries changes as a result of the evolution of hydrogen, and interlayers and discontinuities of various sizes are formed. In a certain range of gas concentration, as the latter increases, the grain size diminishes. On the basis of the study, the distribution of the gas during crystallization of aluminum alloys was determined as a function of the initial gas saturation of

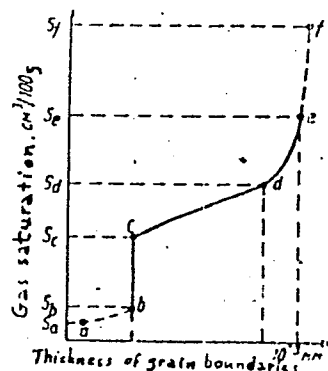
Card 1/2

1 105775-06

ACC NR: AT6024943

the liquid metal, and is shown in Fig. 1.

Fig. 1. Distribution of gas during crystallization of aluminum alloys



In the latter, portion a-b indicates interlayers of second phases and of the gas dissolved therein; portion b-c shows the stage of dissolution of hydrogen in the solid solution and the formation of intrablock porosity; portion c-d is linear and characterized by the liberation of gas along grain boundaries with formation of micropores and discontinuities; d-e denotes grain refining due to the isolation of the growing crystals from the liquid phase by the liberated hydrogen; e-f characterizes the appearance of cellular porosity and macroporosity, and point f corresponds to the maximum quantity of hydrogen capable of dissolving in the melt at the crystallization temperature. Orig. art. has: 2 figures and 1 table.

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 005/ OTH REF: 002

Card 2/2

CA SEMENOV, A. I.

Pesticides 15-17

A complex method for the control of the cabbage moth and the cabbage fly by dusting with hexachloran. A. I. Semenov. *Doklady Vsesoyuz. ordena Lenina Akad. Nauk SSSR*. 1950, II, 1186. — Dusting 2-3 times with hexachloran is recommended for these pests at the time the plants are set out.
M. G. Moore

1. SEMENOV, A. Ye.
2. USSR (600)
4. Onions - Diseases and Pests
7. Combined method for applying benzene hexachloride dust in controlling the onion fly *Shortophila antiqua* in raising seed onions. Dokl. Akad. sel'khoz. 18, No. 3, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

SEMINOV, A. Ye.

11-57-6-12668

Translation from: Referativnyy zhurnal, Geografiya, 1957, Nr 6,
p 128 (USSR)

AUTHOR: Semenov, A. Ye.

TITLE: Northern Corn Destroyers (Vrediteli kukuruzy na Severe)

PERIODICAL: Zashchita rast. ot ovedit. i bolezney, 1956, Nr 2,
pp 53-54

ABSTRACT: Bibliographic entry
Card 1/1

SEMENOV, A. Ye.

USSR/General and Special Zoology: Insects

P-2

Abstr Jour : Zool Zhur - Biol., No 15, 1953, No 62970

Author : SEMENOV A. Ye.
Inst : Sci Res Inst of Far Northern Agriculture
Title : The Control of the Onion Fly, *Chortophila anti-*
qua. Reig., on the Common Onion in the Far North

Orig Pub : Tr. S.-I. In-ta s. Kh. Krayn. Severn., 1957, 5,
69-122

Abstract : In the forest tundra zone the fly develops in one generation, in the taiga zone in two generations: spring and summer. In the far north, in periods of abundant moisture, the fly is the scourge of the common onion. Reducing the number of plants in the onion set increases the volume and weight of the bulblots, delays their ripening, and causes bolting when they are planted for food. Shallow plowing is a necessity, as is plowing the autumn fallow; the common onion plant-

Ind : 1/2

RYABCHENKO, Averin, agronom-entomolog; BOGOVIK, I.V., kand.biol.nauk;
ROGACHEV, V.L., starshiy nauchnyy sotrudnik; MARAKULIN, A.I.,
mladshiy nauchnyy sotrudnik; YATSENKO, G.K.; RUPAYS, A.A., agronom-
entomolog; CHIKVILADZE, I.D., kand.sel'skokhozyaystvennykh nauk;
SEMEINOV, A.Ye., kand.sel'skokhozyaystvennykh nauk; MANUKYAN, V.V.

Brief reports. Zashch.rast.ot vred.i bol. 4 no.3:54-56 My-Je
'59. (MIRA 13:4)

1. Nachal'nik Pavlodarskogo otryada po bor'be s vreditelyami
(for Ryabchenko). 2. Zaporozhskaya opytnaya stantsiya (for
Rogachev). 3. Bostandykskoye opytnoye pole Uzbekskogo instituta
sadovodstva i vinogradarstva (for Marakulin). 4. Starshiy agronom
Khabarovskoy karantinnoy inspeksii (for Yatsenko). 5. Zaveduyu-
shchiy sektorom sluzhby ucheta i prognozov Ministerstva sel'-
skogo khozyaystva ArmSSR (for Mamukyan).

(Plant diseases) (Agricultural pests)

L 9486-66

ACCESSION NR: AT4037672

S/2981/64/000/003/0330/0338

AUTHOR: Semenov, A. Ye.; Zasy*pkina, V. A.; Gabidullin, R. M.

TITLE: New procedures for refining aluminum alloys

SOURCE: Alyuminiyevy*ye splavy*, no. 3, 1964. Deformiruyemy*ye splavy* (Malleable alloys), 330-338

TOPIC TAGS: aluminum alloy, alloy AV, alloy DI, alloy DI6, alloy AMg6, alloy AK8, magnalium, duralumin alloy, aluminum alloy refining, bulk vacuum refining, continuous chlorination refining, continuous filtration refining, granulated magnesite refining, carnallite flux, cryolite flux, melt gas saturation, chlorination bath, filtration tank

ABSTRACT: Laboratory and field experiments were carried out with alloys DI6 and AK8 to compare the effectiveness of flux and vacuum refining of these alloys in the furnace to mixer stages of the casting process. Other tests concerned continuous chlorination refining and granulated magnesite filtration in the mixer to mold stages. Vacuuming (720±5C, five minutes, 0.2-0.5 mm Hg, height of metal column in crucible 100±5 mm) was effective in removing solid non-metallic impurities, its effectiveness improving with high initial gas saturation levels (0.32% impurities at 0.15 to 0.0% at 0.35 cc/100 g). Factory tests with vacuuming

32
17
B+1

L 9486-66

ACCESSION NR: AT4037672

15

(ladle capacity 2 tons, height of metal column 1000-1100 mm, 730-680C, 15 min., residual pressure ≈ 1 mm Hg) and the use of flux (20-23% cryolite, melt temp. 700-730C, 2-3 kg flux per ton of melt) confirmed that the former is more effective (0.04% impurities as compared to 0.30%); hence, continuous vacuum refining in the ladle or placement of a vacuum chamber between furnace and mixer are recommended. Gaseous chlorination (AMg6) in the mixer proved unsuitable. However, chlorination in a special bath placed between mixer and mold (see Fig. 1 in the Enclosure) reduced the content of impurities to $0.200 \text{ mm}^2/\text{cm}^2$ (compared to 0.284 without chlorination; both samples preliminarily refined in the mixer with carnallite flux). Filtration through an intermediate tank (see Fig. 2 in the Enclosure) containing granulated magnesite (diameter 6-10 mm; filtering compartment volume 1500 cc or greater) in liquid cryolite flux produced the best result for durable alloys; with liquid carnallite flux this method was best for AMg6, and is also recommended for magnalium alloys. I. L. Teytel, S. M. Anan'in, N. M. Babarykin, A. M. Shumskiy, V. I. Kulakov, G. A. Kopytov, M. A. Kryukov, I. Ya. Zait'sman, N. D. Vinokurov, M. L. Vasilenskaya, G. S. Makarov, A. M. Landa, P. Ye. Khodakov, and V. V. Solov'yeva took part in various aspects of the work. Orig. art. has: 4 tables and 2 diagrams.

ASSOCIATION: none

Card 2/5

L 9486-66

ACCESSION NR: AT4037672

SUBMITTED: 00

SUB CODE: MM

DATE ACQ: 04 Jun 64

NO REF SOV: 003

ENCL: 02

OTHER: 000

Card 3/5

L 9486-66

ACCESSION NR: AT4037672

ENCLOSURE: 01

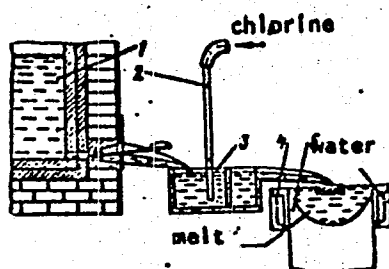


Figure 1. Continuous chlorination of melt during ingot casting:

1 - mixer; 2 - quartz tube; 3 - chlorination tank;
4 - mold; 5 - ingot.

Card 4/5

L 9486-66

ACCESSION NR: AT4037672

ENCLOSURE: 02

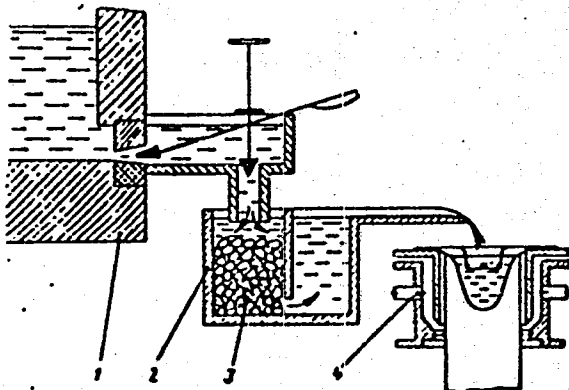


Fig. 2. Continuous filtration of melt during ingot casting:
1 - mixer; 2 - filtration tank; 3 - filter; 4 - mold.

Card 5/5 *ido*

21.000
S/649/61/000/00-000/000
D205/D503

18.1210(2402)

AUTHORS: Podsechinov, A.B., and Semenov, A.Ye.

TITLE: Influence of the dimensions of the transition region in large ingots on the mechanical and casting properties of deformable aluminum alloys

SOURCE: Fridlyander, I.N., V.I. Dobatkin, and Ye.D. Zakharov, eds. Deformiruyemye alyuminiyevyye splavy; sbornik statey. Moscow, 1961, 161 - 168

TEXT: The cooling rate during continuous casting, and the crystallization velocity connected with it influence the mechanical properties, chemical non-homogeneity and the structure of ingots. The quality of large ingots produced by continuous casting is substantially lowered by the increase in casting velocity. The above influences can be connected with the extent of the liquid-solid state region. The vertical dimensions of this region increase with the casting velocity. This causes shrinkage porosity, visible at x250 magnification. It seems that only the lower part of the transition region, li-
Card 1/3

S/689/61/000/000/025/031
D205/D303

AUTHORS: Novikov, I.I., and Semenov, A.Ye.

TITLE: Hot-cracking of P 95 (V95) alloys

SOURCE: Fridlyander, I.N., V.I. Dobatkin, and Ye.D. Zakharov, eds.
Deformiruyemye alyuminiyevyye splavy; sbornik statey.
Moscow, 1961, 189 - 194

TEXT: A study of the influence of the chemical composition on the hot-cracking of V95 alloys. The slight changes in the composition are closely connected with the plasticity in the solid-liquid state. Ring tests were employed for evaluating hot cracking. The ratio of the main crack to the perimeter of the radial cross-section of the ring served as an indicator. The ring dimensions were: External diameter 60 mm, internal diameter 46 mm, height 20 mm. If the hot-cracking of the V95 alloy is designated as 100 then that of the other alloys is as follows: A1 (D1) (0.2 % Si) - 95, D1 (0.5 % Si) -20, AK6 (AK6) - 42, AK8-5, A20-2. This sequence was also observed during the continuous casting when the tendency towards hot-cracking was evaluated.
Card 1/2

Hot-cracking of 95 (V95) alloys

S/689/61/000/000/025/030
D205/D303

Investigation of the influence of the chemical changes (allowed within the GOST specifications) has shown that the decrease of Mn content in V95 drastically reduces the tendency towards hot-cracking. The influences of Si and Fe on the hot-cracking are opposing; the increase of Si promotes and the increase of Fe inhibits hot-cracking. The influence of Si and Fe on the hot-cracking is connected with their action on the plasticity of the alloy in the solid-liquid form. At high Fe and low Si contents the region of low plasticity extends for a smaller temperature range which lowers the hot-cracking of the ingot. Mg has a considerable influence on the hot cracking, the lowest values being obtained at around 2.4 %, while the changes in Cu and Zn contents within the ranges allowed by GOST had no effect. Conclusions: By close control of the chemical composition the hot-cracking of V95 alloys can be considerably reduced. The ring test gives a first approximation evaluation of the hot-cracking tendency of industrial alloys. There are 5 figures and 14 references: 12 Soviet-bloc and 2 non-Soviet-bloc. The references to the English-language publications read as follows: A.R.E. Singer and P.H. Gennings, J. Inst. Metals, 1946, v. 73, p. 197; J. Ver8, Metal Industry, 1936, v. 48, no. 15, p. 431.

Card 2/2

S/137/62/000/005/052/150
A006/A101

AUTHORS: Novikov, I. I., Semenov, A. Ye.

TITLE: Hot brittleness of B 95 (V95) type alloys.

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 5, 1962, 31, abstract 50202
(V sb. "Deformiruyemye alyumin. splavy", Moscow, Oborongiz, 1961,
189 - 194)

TEXT: Results are presented of investigating the effect of the chemical composition on hot brittleness of V95 type alloys. Hot brittleness of the alloys was estimated on a ring-shaped technological specimen. The ratio of the basic crack length to the perimeter of the radial ring section (in %) was used as an index of hot-brittleness. The casting temperature was 690°C. By varying the Mn, Si, Fe and Mg content in V95 type alloys, their susceptibility to hot cracks during ingot casting can be considerably reduced. The effect of these admixtures upon hot brittleness of alloys of the same type is connected with changes in the ductility of alloys in the solid-liquid state and with changes in the extent of the hot-brittleness zone in continuous-cast ingots.

[Abstracter's note: Complete translation]

G. Svodtseva

Card 1/1

LOKTIONOV, A.A.; SEMENOV, A.Z.

Determination of the charge of relativistic nuclei by the
method of counting delta electrons. Prib. i tekhn. eksp. no.3:
31-33 My-Je '60. (MIRA 14:10)

1. Institut yadernoy fiziki AN KazSSR.
(Nuclei, Atomic) (Electrons)

SEMENOV, B.

Let us province more coal. NTO 2 no.1:33 Ja '60.
(MIRA 13:5)

1. Predsedatel' soveta Nauchno-tekhnicheskogo obshchestva
gornoye shakhty No.3 imeni Kirova, g.Karaganda.
(Karaganda--Coal mines and mining)

SEMENOV, B.

Building inter-collective farm brickworks. Sel'.streil.11 no.7:10
Jl '56. (MIRA 9:9)

1.Nachal'nik Novosibirskogo oblastnogo upravleniya po stroitel'stvu
v kolkhozakh.
(Novosibirsk Province--Brick industry)

SEME NOV, B.

Physical culture group participates in the All-Union Agricultural
Exhibition. Prof.-tekhn.cbr. 11 no.3:21-22 '54. (MIRA 7:8)
(Klin--Physical education and training) (Physical education
and training--Klin)

SEMENOV, B.

USSR/Electronics - Television receivers

Card 1/1 : Pub. 89 - 18/26

Authors : Semenov, B., and Baldin, L.

Title : Adjusting the "Raduga" television receiver

Periodical : Radio 12, 37-40, Dec 1954

Abstract : The method of adjusting the "Raduga" color-television receiver and the tuning instruments are described. Detailed instructions are given for tuning the video-amplifiers, audio receiver, and the input circuits. Graphs are presented on the frequency characteristics of the various stages of the video signal amplifiers, and the audio-frequencies of the receiver, as well as oscillograms of the scanning-system pulses. Voltages impressed on the plate, cathode, and grid of each of the 23 tubes of the television set are given in a special table. Graphs; table.

Institution :

Submitted :

SOV/107-58-12-9/55

9(9)

AUTHOR:

Semenov, B., Chief Engineer

TITLE:

In the IRPA Laboratories (V laboratoriyakh
IRPA)

PERIODICAL:

Radio, 1958, Nr 12, pp 8-9 (USSR)

ABSTRACT:

This is an account of recent work carried out by the team of the Leningrad Scientific Research Institute for Radio Broadcasting Reception and Acoustics (IRPA). Details are given of new microphones, studio equipment for radio centers and wide-band console units for quality control in studio channels developed by the institute. IRPA has also produced new-type radio receivers, acoustic systems and loudspeakers. The IRPA has also produced a dispersed acoustic system, and intends to develop a so-called "pseudo-stereophonic" sound system, by introducing a time lag in one of the sound reproduction channels. The IRPA has

Card 1/3

In the IRPA Laboratories

SOV/107-58-12-9/55

further developed the EPU-Sh record-player, manufactured by the Yaroslavskiy plant with a EPK-55 pick-up, having a range of 50-10,000 cycles with an irregularity of ± 5 decibels; and a magnetic-electric pick-up with a range of 30-15,000 cycles with an irregular frequency characteristic of ± 3 decibels. The IRP has also developed public address system equipment including sound amplification stations with a range of 40 to 12,000 cycles and irregularity of ± 1 decibel, a nonlinear distortion coefficient of less than 2% and an intermodulation coefficient not above 4% at normal power. For improved sound quality, the stations' acoustic systems are based on electrodynamic loudspeakers. Sound equipment for the Soviet Pavilion at the 1958 Brussels International Exhibition included IRPA-designed amplification apparatus produced at one of the plants of the Vladimirskiy sovnarkhoz, at the Tul'skiy plant and at the IRPA experimen-

Card 2/3

In the IRPA Laboratories

SOV/107-58-12-9/55

tal plant. The IRPA is also tackling the problem of producing an economical high-quality loudspeaker for country areas. Finally, the author points out that improving the quality of radio receivers and loudspeakers is insufficient as long as transmission is of poor quality. Even VHF FM transmissions in Moscow and Leningrad are very unsatisfactory.

ASSOCIATION: IRPA

Card 3/3

6(4)

06411;

SOV/107-59-5-9/51

AUTHOR: Semenov, B., Chief Engineer

TITLE: Introducing the Use of Semiconductors in Broadcast Receivers

PERIODICAL: Radio, 1959, Nr 5, pp 8 - 9 (USSR)

ABSTRACT: The Nauchno-issledovatel'skiy institut radioveshchatel'nogo priyema i akustiki (IRPA) (Scientific Research Institute of Broadcasting Reception and Acoustics) developed a number of receivers which are being produced by the Soviet radio industry: "Voskhod", "Progress", "Syurpriz", "Rodina-59". Presently the Institute is working on the development of a high-quality VHF receiver. The block diagram of this receiver is a conventional one. For the long and medium wave range, a common mixer stage containing a P403 transistor is used. Two IF stages are built with P402 transistors. Further, there is a diode detector. The VHF circuit consists of an additional

Card 1/2

06414

SOV/107-59-5-9/51

Introducing the Use of Semiconductors in Broadcast Receivers

unit using a P322 transistor. Mixer and heterodyne are equipped with P403 and P322 transistors. The IF circuit is common for all wave ranges and is equipped with different filters. The LF preamplifier, with tone color control, consists of two P13 transistors. The receiver will be built in two units. The HF unit and the LF preamplifier will be housed in one part having the dimensions of a book. The two-channel LF-amplifier is housed in a second unit of larger dimensions. The author mentions that plants of the Leningrad Sovnarkhoz are starting the production of transistorized radio relay equipment for rural areas, as shown by two photographs. This equipment, receiver and amplifier, may also be used for relaying shortwave broadcasts. There are 2 photographs.

ASSOCIATION: IRPA

Card 2/2

SEMENOV, B.

Possibilities of developing stereophonic broadcasting in the
Soviet Union. Radio no.1:44-45 Ja '60. (MLRA 13:5)
(Radio broadcasting)

KONONOVICH, L., kand. tekhn. nauk; SEMENOV, B., inzh.

Make more extensive use of stereophonic sound systems. Radio
no.4:47-49 Ap '64. (MIRA 17:9)

SEMENOV, B.

Radio receivers and phonographs manufactured in 1966. Radic no.1:
5-7 Ja '66. (MIRA 19:1)

1. Glavnyy inzh. Vsesoyuznogo nauchno-issledovatel'skogo instituta
radio priyema i akustiki im. A.S. Popova.

SUBJECT USSR / PHYSICS
 AUTHOR SEMENOV, B.A.
 TITLE A visit to the Atomic Electric Power Plant of the USSR
 PERIODICAL Atomnaja Energija, 2, fasc.1, 82-82 (1957)
 Issued: 3 / 1957

CARD 1 / 2

PA - 1963

The World's first Atomic Electric Power Plant, its equipment and operation was visited by a large number of Soviet and foreign delegations. The plant was visited by more than 10.000 representatives of various scientific and public organizations of the USSR. Among them were delegates sent by the Academy of Science in the USSR headed by the president of this Academy, Mr. NESMEJANOV, collaborators of the Institute for Physical Problems of the Academy of Science in the USSR, of the Institute for Automatics and Telemechanics, of the Energetic Institute of the Academy of Science in the USSR, as well as of many other scientific institutes, firms, and public organizations.

According to data available on the 1. September 1956, the power plant was visited by more than 2000 delegates from 52 countries of the world. Among them were Chinese, Koreans, Frenchmen, Englishmen, Indians, Indonesians, Americans, Germans, Egyptians, Syrians, Mexicans, and Uruguayans. Among the guests of honor of the power plant there were such prominent statesmen as O.GROTEWOHL, KIM IR SEN, NEHRU, SUKARNO, J.TITO, W.ULBRICHT, U NU, HO CHI MINH, CHU DE.

SEME NOV, B. A.

AUTHOR: SEMENOV, B. A. PA - 2317
 TITLE: The Soviet Scientific-Technical Exhibition at Leipzig.
 (Sovetskaya nauchno-tekhnicheskaya vystavka v Leyptsige, Russian)
 PERIODICAL: Atomnaya Energiya, 1957, Vol 2, Nr 3, pp 290 - 291 (U.S.S.R.)
 Received: 4 / 1957 Reviewed: 5 / 1957

ABSTRACT: The exhibition was held under the title "Atomic Energy for Peaceful Purposes" and was opened on November 11th 1956. It showed a great variety of possibilities of applying nuclear energy in economy. Visitors are made acquainted with the general principles of the production of nuclear energy and are shown an abundant collection of uranium minerals. Special interest was displayed for the departments on existing and projected reactors and nuclear power plants and for the application of radioactive isotopes in technical engineering, industry, and medicine. The exhibition was visited by 90.000 people within 5 weeks, among them, it is said, were many scientists from Eastern and Western Germany.
 Next, part of an article dealing with this exhibition and published in the communist Eastern-Germany newspaper "Neues Deutschland" is repeated. Also Soviet films on the production of atomic energy and its applicability were shown.

Card 1/2 Specialists interested in any particular details were able to

LEONIDOV, Iu. B., LITVIN, V. B., KUZNETZ, V. Ya., STOKHIN, V. G., KOGUTSKIY, L. A.,
KHAIS, A. F., BEVERIANOV, V. B., SEMENOV, B. A., GIANZI, G. M.,

"Operating Experience of the APS-1."

Paper presented at the Symposium on Small and Medium Reactors, Vienna, 5-9 Sept 60

SEMENOV, B. A.

SEMENOV, B. A.

25373

S/089/61/011/001/002/010
B102/B214

21.1000

AUTHORS:

Yevdokimov, Yu. V., Kozlov, V. Ya., Konochkin, V. G.
Kochetkov, L. A., Krasin, A. K., Lytkin, V. V., Sever'yanov,
V. S., Semenov, B. A., Ushakov, G. N.

TITLE:

Experience from work with the First Nuclear Power Plant

PERIODICAL:

Atomnaya energiya, v. 11, no. 1, 1961, 12 - 18

TEXT: The First Nuclear Power Plant in the USSR, which was the first in the world, has been successfully operated for seven years; this paper presents a short survey of the experiences accumulated during the first six years at this station. The station itself possesses all the equipment available at a large research reactor. The construction of the Beloyarskaya GRES (Beloyarsk State Regional Electric Power Plant) represents a further development of the First Nuclear Power Plant. The working of the reactor at different power levels: In the so-called "cold state", at 0.01% of the nominal power, the reactor has the lowest power level at which the automatic power regulator can still function; the rise in this level is checked by measuring the neutron flux; the power level can be doubled within 20 sec.

Card 1/8

25375

S/069/61/011/001/001/010
B102/B214

Experience from work with ...

Heating begins with a rise of the power level to 5% of the nominal power (first cycle: 160-170°C, pressure in the second cycle: 7 - 8 atm), then to 10% of the nominal power (temperature at the entrance to the reactor: 190°C, steam pressure 12.5 atm); these parameters remain unchanged on further increase of power. The total heating time for the system is 3.5 - 4 hours; during this time, nitrogen is blown in the graphite system to remove oxygen. The parameters of the power station for 50, 75, and 100% of the nominal power are given in Table 1. On shutting the reactor, it is first cooled, by utilizing the natural loss of heat, to the temperature of water in the first cycle (110-120°C), which requires 1.5-2 hours. The cooling water is then removed from circulation and cooled; this enables the reactor to be cooled rapidly. Reliability and duration of the reactor's operation depend on the quality of the fuel element; the station works with tube type elements. The fuel is contained between two tubes of nonrusting steel (the inner is 0.4 mm thick and the outer 0.2 mm thick). This kind proved to be particularly reliable: Not a single element has been dislocated during the whole period the station has been in operation. The system of partial renewal of the fuel element is used for guaranteeing the deepest possible burning. (N. A. Dollezhal et al. reported on this at the Second Geneva

Card 2/g

25373

S/C89/61/011/001/002/010
B:02/3214

Experience from work with ...

Conference, 1958). Numerical data about the consumption are given in Table 2. Deformation of the fuel elements were checked, a deformation of 14.20 ± 0.02 mm of the element jackets was found. Experiments relating to the boiling of water in the fuel channels and determination of the hydrodynamic characteristics of the fuel elements in the reactor were started in 1956. The preliminaries were completed in September 1956, and one channel was brought to boiling operation. This first boiling channel worked for 400 hours at thermal loads of $(0.45 - 0.85) \cdot 10^6 \text{ kcal/m}^2 \cdot \text{hr}$ (steam content 5 - 20% by weight, flow rate 250 kg/hr). As the system proved satisfactory, more channels were brought to boiling operation; in the middle of 1957 there were 70 such channels, more than half of the total. The boiling operation was characterized by the following parameters: Steam content at the exit of the channels: 5 - 25% by weight, thermal load $(0.6 - 1.3) \cdot 10^6 \text{ kcal/m}^2 \cdot \text{hr}$, water flow rate 0.7 - 1 m/hr at 100 atm and 190°C at the exit. Since superheating of steam constitutes one of the most important methods for increasing efficiency, experiments in this connection were carried out in the following years with a special experimental loop (Fig. 1) to study the methods of bringing the steam to a superheated state. For this, a method of

Card 3/9

25373

4

S/089/61/011/001/002/010
B102/B214

Experience from work with ...

starting was perfected which requires only such equipment as is used in normal operation. During the period of transformation of the superheating operation, the superheating channel could either be closed, or it could work without cooling ("dry operation"), or with water cooling. The last named method had a number of advantages. The following starting methods were studied: Starting with continuous increase of the reactor power, starting with decrease of the reactor power, and combined methods (first the former, and then the latter but lowering the power only for about 60 - 70%). To increase the safety of the reactor, a special system was built in 1959 which prevents the escape of the gas - steam mixture into the ventilation system when the tubes of the experimental holes break down. This system "for localizing the damage due to accident" (Fig. 2) not only serves this purpose but also helps to purify the gas after the accident has occurred. The system consists of a cylindrical tank (6.2 m^3) whose lower part (1.8 m^3) is filled with water; in it are placed the cooling coils and special nozzles through which the steam - gas mixture streams into the water in the case of an accident. The gas is introduced in a sensitive gas container. The whole system is placed in a protective container equipped with manometers, thermometers, and dosimeters. ~~Figure~~

Card 4/8

4 Submitted: Feb 1961

SEMENOV, B.; MOSOLOV, K.; GAL'PERIN, S.

Experience of veterans to the service of science. Prof.-tekh.obr.
22 no.4:18 Ap '65. (MIRA 18:5)

ACCESSION NR: AP4014673

S/0108/64/019/001/0031/0035

AUTHOR: Rozhdestvenskiy, A. A. (Active member); Semenov, B. A. (Active member)

TITLE: Theory of frequency conversion

SOURCE: Radiotekhnika, v. 19, no. 1, 1964, 31-35

TOPIC TAGS: frequency conversion, frequency conversion theory, nonlinear element frequency conversion, frequency conversion characteristics

ABSTRACT: Frequency conversion with a nonlinear element whose characteristic is specified in a general form is theoretically considered. It is found that the separation of a combination frequency takes place in the case where the exponent of at least one term of the series which approximates the nonlinear-element characteristic is higher by 1 or more than the number of the heterodyne-voltage harmonic used. A method (based on the evaluation of integrals of Tchebycheff's

Card 1/2

ACCESSION NR: AP4014673

polynomials) is suggested for determining the nonlinear-element optimum characteristic which ensures a maximum conversion factor with minimum spurious combination frequencies. Orig. art. has: 14 formulas and 2 tables.

ASSOCIATION: Nauchno-tekhnicheskoye obshchestvo radiotekhniki i elektrosvyazi (Scientific and Technical Society of Radio Engineering and Electrocommunication)

SUBMITTED: 04Jun62

DATE ACQ: 07Feb64

ENCL: 00

SUB CODE: GE

NO REF SOV: 005

OTHER: 000

Card 2/2

SOV/156-58-4-38/49

AUTHORS: Mikhant'yev, B. I., Sklyarov, V. A., Semenov, B. A.

TITLE: The Preparation of the Vinyl Ester of the Acridine-9-Carbonic Acid and Their Incomplete Acylals (Polucheniye vinilovogo efira akridin-9-karbonovoy kisloty i yego nepolnykh atsilaley)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Khimiya i khimicheskaya tekhnologiya, 1958, Nr 4, pp 759-760 (USSR)

ABSTRACT: By vinylation of acridine compounds vinyl esters of the acridine-9-carbonic acid and their incomplete acylals were prepared. The preparation of the vinyl ester was carried out according to the method developed by Faworski-Schostakowski (Favorskiy-Shostakovskiy) at 180° under a pressure of 20 atmospheres. The yield is 24%. The compound is easily soluble in boiling water, benzene, toluene, dioxane and other organic solvents. The melting point is at 93°-94°C. Incomplete acylal of the composed vinyl ester was prepared with methyl cyclohexane in the reflux autoclave. The acylal is a yellow liquid with aromatic scent, it is soluble in organic solvents and decomposes when heated. The yield is 55%. The elementary analysis gave the following formula: $C_{23}H_{25}O_3N$. The compound has the following character-

Card 1/2

SOV/156-58-4-38/49

The Preparation of the Vinyl Ester of the Acridine-9-Carbonic Acid and
Their Incomplete Acylals

istics: $n_D^{20} = 1.538$; $d_4^{20} = 1.03$; $MR = 105.99$. The incomplete
acylal of the composed vinyl ester of the acridine-9-carbonic
acid with heptanol was prepared in a yield of 30%. The acylal
is a light green liquid with a strong odor. The empirical
formula is $C_{23}H_{27}O_3N$ and has the following characteristics:
 $n_D^{20} = 1.31$; $d_4^{20} = 0.75$; $MR = 92.0$. There are 2 Soviet references.

ASSOCIATION: Kafedra vyschomolekulyarnoy khimii Voronezhskogo gosudarstven-
nogo universiteta (Chair of Chemistry of Highmoleculars at
the Voronezh State University)

SUBMITTED: March 22, 1958

Card 2/2

L 61412-65 EWT(d)/EWP(h)/EWP(1)

ACCESSION NR: AP5019108

UR/0286/65/OC0/012/0134/0135

AUTHORS: Afonin, A. N.; Yerzhova, O. I.; Ivanovskiy, K. Ya.; Ioffe, P. S.;
Komashenko, A. Kh.; Kon'kova, T. F.; Lipovetskiy, V. A.; Mel'nikov, V. V.;
Mishedchenko, Yu. D.; Neverovich, A. M.; Paris-Revuelet, A. A.; Preobrazhenskiy,
O. A.; Rikman, M. A.; Semenov, B. D.; Semenov, V. M.; Sukhanov, A. I.; Sheleg,
R. G.; Yaguzhinskiy, S. M.

TITLE: Transmission device of an overhead thrust conveyor. Class 81, No. 172231

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 12, 1965, 134-135

TOPIC TAGS: overhead conveyor, transmission, crane

ABSTRACT: This Author Certificate presents a transmission device of a suspended thrust conveyor. The device contains spring-supported vanes set in a rotary motion by a star wheel meshing with the drive chain of the conveyor (see Fig. 1 on the Enclosure). To prevent the possibility of wedging the carriage during its transport, the device is provided with a two-armed spring-supported lever. One of the arms serves as a stopper for the carriage, and the other one (provided with a roller) interacts with a circular template fixed on the star wheel. The template has openings for receiving the roller which frees the carriage from the stopper.

Card 1/3

L 61412-65

ACCESSION NR: AP5019108

Orig. art. has: 1 diagram.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut pod"yemno-transportnogo mashinostroyeniya (All-Union Scientific Research Institute of Hoisting and Conveying Machine Construction)

SUBMITTED: 12Aug63

ENCL: 01

SUB CODE: IE

NO REF SOV: 000

OTHER: 000

Card 2/3

SEMENOV, B. F. Cand Med Sci -- (diss) "A Study of the Toxic Properties of Viruses of the Ornithosis-Psittacosis Group, Isolated in the USSR." ~~Mos~~ Mos, 1957. 12 pp 20 cm. ~~XXXXXX~~
(Academy of Sciences USSR, Inst ^{for the Study} of Poliomyelitis ~~Studies~~), 200 copies (KL, 18-57, 98)

SEMENOV, B.F.
USSR / Virology. Human and Animal Viruses

E-3

Abs Jour : Ref Zhur - Biol., No 2, 1958, No 5037

Author : Semenov, B.F.

Inst : Not given

Title : Study of Toxic Properties of the Virus Group Ornithosis-psittacosis, Isolated in the USSR. Communication I. Appearance of Toxic Properties of Viruses in Experiments on White Mice.

Orig Pub : Vopr. virusologii, 1957, No 1, 25-29

Abstract : Viruses from strains V, Lori, and Ara were used. White mice were injected intravenously with 0.5 ml of a 20 percent virus suspension containing yolk follicles. In mice weighing 10-12 g strain V caused intoxication in dilutions of 1:40, strain Ara and Lori in dilutions of 1:20, and strain 15 -- only in a
→ 1:10 and

Card : 1/2

SEMENOV, B.F.; LASHKEVICH, V.A.

Effect of chlortetracycline and oxytetracycline on toxic properties of Miyagawanella group in vitro [with summary in English]. Antibiotiki 3 no.6:73-77 '58. (MIRA 12:2)

1. Institut po izucheniyu poliomyelita AMN SSSR.

(MIYAGAVANELLA, eff. of drugs on
chlortetracycline & oxytetracycline (Rus))
(CHLORTETRACYCLINE, effects,
on Miyagavanella (Rus))
(OXYTETRACYCLIN, effects,
same)

GAVRILOV, V.I.; SEMENOV, B.F.

First conference devoted to reports of the Moscow Institute
of Research on Preparations to Control Poliomyelitis. Vop.
virus. 4 no.2:250-253 Mr-Apr '59. (MIRA 12:6)
(Poliomyelitis)

AVTSYN, A.P.; SEMENOV, B.F.; VITING, A.I.

Morphological changes in white mice following Miyagawanella
ornithosis intoxication. Vop.virus. 4 no.3:289-293 My-Je
'59. (MIRA 12:8)

1. Institut po izucheniyu poliomyelita i patologoanatomiches-
skoye otdeleniye Klinicheskoy infektsionnoy bol'nitsy No.1.
(ORNITHOSIS, exper.

pathol. reactions to toxic doses of Miyaga-
wanella ornithosis in white mice (Rus))

SEMENOV, B.F.

Study on the toxic properties of Miyagawanella isolated in the U.S.S.R. Report No.2: Experimental characteristics of toxic properties. Vop.virus. 4 no.3:293-296 My-Je '59.

(MIRA 12:8)

1. Institut po izucheniyu poliomielita AMN SSSR, Moskva.
(MIYAGAWANELLA,

virulence of Russian strains (Rus))

AGAFONOV, V.I., dotsent, polkovnik meditsinskoy sluzhby; GAVRILOV, V.I.,
kand.med.nauk; SEMENOV, B.F., kand.med.nauk

Enteric viruses and diseases caused by them. Voen.-med.zhur. no.9:
35-41 S '59. (MIRA 13:1)
(VIRUS DISEASES)

SEMENOV, B.F.; GAVRILOV, V.I.

Toxic properties of viruses. Vop. virus. 5 no. 1:5-13 Ja-F '60.
(MIRA 14:4)

(VIRUSES)

AKATOV, A.K.; GAVRILOV, V.I.; SEMENOV, B.F.

Two examples of the use of the statistical method for analyzing
results of a virological experiment. Vop. virus. 5 no. 1:114-117
Ja-F '60. (MIRA 14:4)

(STATISTICS, MEDICAL)

SEMENOV, B.F.; AKATOV, A.K.; GAVRILOV, V.I.

Choice of method for calculating ED 50 in the practice of
virological studies. Vop. virus. 5 no. 6:741-744 N-D '60.
(MIRA 14:4)

(POLIOMYELITIS)

SEMENOV, B.F.; ROZINA, E.E.

Effect of protracted passage of type I poliomyelitis virus
in tissue culture on its virulence. Trudy Mosk. nauch.-
issl. inst. virus. prep. 2:111-116 '61. (MIRA 17:1)

BOGOMOLOVA, N.N.; SEMENOV, B.F.; STEPANOV, G.M.

Evaluation of the usefulness of different tissue cultures
for the titration of the tick-borne encephalitis virus.
Trudy Mosk. nauch.-issl. inst. virus. prep. 2:158-161 '61.
(MIRA 17:1)

SEMENOV, B.F.; BOGOMOLOVA, N.N.; AKOPOVA, I.I.

Multiplication of tick encephalitis viruses in primary cultures
of hog embryo kidney epithelium cells. Vop.virus. 6 no.2:143-146
Mr-Ap '61. (MIRA 14:6)

1. Moskovskiy institut virusnykh preparatov, Moskva.
(ENCEPHALITIS)

SEMENOV, B.F.; REZEPOVA, A.I.

Effect of β -propiolactone on the virus of tick-borne encephalitis.
Vop. virus 6 no.4:432-434 J1-Ag '61. (MIRA 14:11)

1. Moskovskiy institut virusnykh preparatov, Moskva.
(ENCEPHALITIS) (LACTONES)

SEMENOV, B.F.; KARASEVA, P.S.; REZEPOVA, A.I.; STEPANOV, G.M.

Experimental study of a tissue vaccine against tick-borne encephalitis.
Vop. virus. 6 no.6:716-720 N-D '61. (MIRA 15:2)

1. Moskovskiy nauchno-issledovatel'skiy institut virusnykh preparatov.
(ENCEPHALITIS) (TICKS AS CARRIERS OF DISEASE)
(VACCINES)

SEMENOV, B.F.; REZEPOVA, A.I.

Method for the industrial preparation of a noninfectious antigen from the tick-borne encephalitis virus for causing a hemagglutination inhibition reaction. Vop. virus 7 no.1:55-59
Ja-F '62. (MIRA 15:3)

1. Moskovskiy nauchno-issledovatel'skiy institut virusnykh preparatov.

(ANTIGENS AND ANTIBODIES)
(ENCEPHALITIS)
(BLOOD AGGLUTINATION)

SEMENOV, B.F.; BOGOMOLOVA, N.N.; STEPANOV, G.M.

Studying the multiplication of viruses of the tick-borne encephalitis group in chicken fibroblast cultures. Vop. virus. 7 no.2:243 Mr-Apr '62.
(MIRA 15:5)

1. *Moskovskiy nauchno-issledovatel'skiy institut virusnykh preparatov.*
(ENCEPHALITIS) (TISSUE CULTURE)

KARASEVA, P.S.; SEменов, B.F.

Comparative evaluation of the suitability of different tissues for
the detection of minimum doses of the tick-borne encephalitis virus.
Vop.virus 7 no.4:35-39 J1-Ag '62. (MIRA 15:8)

1. Moskovskiy nauchno-issledovatel'skiy institut virusnykh preparatov.
(ENCEPHALITIS) (TISSUE CULTURE)

SEMENOV, B.F.; ROZINA, E.E.

Dynamics of the multiplication of the poliomyelitis virus and of the development of morphological changes in the central nervous system of monkeys following infection with strains of varying virulence.
Vop.virus 7 no.4:59-64 J1-Ag '62. (MIRA 15:8)

1. Moskovskiy nauchno-issledovatel'skiy institut virusnykh preparatov.

(POLIOMYELITIS VIRUSES) (NERVOUS SYSTEM--DISEASES)

SEMENOV, B.F.; KARASEVA, P.S.; PARIZH, B.M.; MIRONOV, V.A.

Dry tissue vaccine for preventing tick-borne encephalitis. Vop.
virus.7 no.5:613-614 S-O '62. (MIRA 15:11)

1. Moskovskiy nauchno-issledovatel'skiy institut virusnykh
preparatov. (VACCINES) (ENCEPHALITIS)

SEMENOV, B.F.; KARASEVA, P.S.; REZEPOVA, A.I.

Cultivation and inactivation of the virus in the preparation of
tissue vaccine for the prophylaxis of tick-borne encephalitis.
Vop.virus. 7 no. 6:654-657 N-D '62. (MIRA 16;4)

1. Moskovskiy nauchno-issledovatel'skiy institut virusnykh
preparatov.

(ENCEPHALITIS)

(VACCINES)

SEMENOV, B. F.; KARASEVA, P. S.

"Khimicheskaya inaktivatsiya virusov iz gruppy kleshchevogo entsefalita."

report presented at Symp on Virus Diseases, Moscow, 6-9 Oct 64.

Moskovskiy nauchno-issledovatel'skiy institut virusnykh preparatov.

SEMENOV, B. F.; REZEFOVA, A. I.

"Gemagglutinirovushchaya aktivnost' virusov iz gruppy kleshchevogo entsefalita kak shtamovyy priznak i funktsiya usloviy kul'tivirovaniya."

report presented at Symp on Virus Diseases, Moscow, 6-9 Oct 64.

Moskovskiy nauchno-Issledovatel'skiy institut virusnykh preparatov.

SEMENOV, B.F.; STEPANOV, G.M.; ROZINA, E.E.; GENDON, Yu.Z.; CHERNOS, V.I.;
KHESIN, Ya.Ye.

Spontaneous viruses in white mice similar to tick-borne encephalitis
viruses. Vop. virus. 9 no.2:169-173 Mr-Apr '64.

(MIRA 17:12)

1. Moskovskiy nauchno-issledovatel'skiy institut virusnykh preparatov.

SEMENOV, B.F.; REZEPOVA, A.I.

Method of mass serological examination for the detection of
antibodies to tick-borne encephalitis virus. Vop. virus. 9
no.3:367-368 My-Je '64. (MIRA 18:1)

1. Moskovskiy nauchno-issledovatel'skiy institut virusnykh
preparatov.

SEMFENOV, B.F.; KARASEVA, P.S.; KURANOVA, L.K.; SALANOVA, T.A.

Postvaccinal and postinfection immunity in tick-borne
encephalitis. Vop. virus. 9 no.5:597-601 S-O '64.

(MIRA 18:6)

1. Moskovskiy nauchno-issledovatel'skiy institut virusnykh preparatov.

SEMENOV, B.F.

Conference on arborvirus infections. Vop. virus. 10 no.2:248-249

Mr-Apr '65.

(MIRA 18:10)

KAMENSKAYA, S. A.; SEMENOV, B. I.; TROITSKIY, V. S.; PLECHKOV, V. M.

Results of precision measurements of lunar radio emission at a wavelength of 1.6 cm. Izv. vys. ucheb. zav.; radiofiz. 5 no.5: 882-884 '62. (MIRA 15:10)

1. Nauchno-issledovatel'skiy radiofizicheskiy institut pri Gor'kovskom universitete.

(Moon—Observations) (Radio astronomy)

L 7797-66 EWT(d)/EWT(1) GG/RB

ACC NR: AP5027617

SOURCE CODE: UR/0109/65/010/011/1952/1960

AUTHOR: Semenov, B. I.
44, 55

ORG: none

TITLE: Dispersion of electromagnetic waves by limited areas of irregular surfaces having a finite conductivity

SOURCE: Radiotekhnika i elektronika, v. 10, no. 11, 1965, 1952-1960

TOPIC TAGS: electromagnetic wave dispersion, electromagnetic wave scattering

ABSTRACT: The problem of dispersion of electromagnetic waves by a limited irregular-surface area having a finite conductance is solved in the Kirchhoff approximation, i.e., it is assumed that the field at each point of that area can be represented as a sum of an incident wave and a wave reflected by a plane tangent to the surface at that point. Both single- and two-dimensional surface irregularities are covered. A method of stationary phase is used for evaluating the

Card 1/2

UDC: 621.371.222.3

L 7797-66

ACC NR: AP5027617

integrals involved. The fringe effect (diffraction at the area boundaries) is neglected; no part of the surface is assumed to be shaded by another part. The results are presented of numerical calculation of the angular characteristics of electromagnetic-wave dispersion by a perfect-conductor surface and by an ideal dielectric ($\epsilon = 4$), for vertical and horizontal polarizations. "In conclusion, the author wishes to thank S. M. Rytov for his attention and help." Orig. art. has: 12 figures and 30 formulas. 44,55

SUB CODE: 09 / SUBM DATE: 23Jul64 / ORIG REF: 009

nw

Card 2/2

Shoruk radioaktivnost' i dozimetriya (Collection of Radiochemical and Dosimetric Methods) Moscow, Medgiz, 1959. 459 p. Errata ally inserted. 9,000 copies printed.

Eds. (Title page): M.G. Gusev, U.Ye. Margulis, A.M. Marov, N.Yu. Tarasenko, Yu.M. Shukhenberg; Ed. (Last book): V.I. Labazov; Tech. Ed.: A.I. Zakharenko.

PURPOSE: This collection of articles is intended for physicists, sanitation and public health doctors, chemists and other specialists working in radioactive dosimetry.

CONTENTS: This work discusses the following subjects: (1) principles of organizing sanitation and dosimetric control in institutions where work is carried on with radioactive substances; (2) radiochemical and chemical methods for determining certain radioactive substances (samples of air, water, soil and foodstuffs); (3) physical methods of determining the level of radioactive gases and aerosols, and methods for determining the level of contamination of working surfaces, clothes and leather coverings; (4) methods of measuring external contamination of the body; (5) absolute and relative methods of measuring the activity of solid and liquid radioactive sources. There are four appendices dealing with methods of calculating the total dosage from sources of ionizing radiation, units of activity, and doses from natural (background) radioactivity in the calcium of foodstuffs. Sanitary regulations observed during transportation, storage, and handling of radioactive substances are discussed, as well as the permissible level of ionizing radiation. The editors thank Yu.V. Shvintsev and D.P. Shirebov. References given at the end of each chapter.

Ch. V. Physical Methods of Determining Contamination of the Ambient Atmosphere Due to Radioactive Aerosols and Gases

1. Determination of the concentration of naturally occurring radioactive aerosols (G.V. Gorbunov, V.Y. Zolotarev, V.I. Katsenkov and Yu.M. Shukhenberg) 154
2. Determination of the radioactive dust content of air with the aid of membrane filters (P.K. Levochkin) 162
3. Determination of the concentration of active aerosols with the aid of the electric precipitator type EP-2 (Yu.M. Shukhenberg and K.G. Kaluzhin) 169
4. Measurement of active aerosols with the aid of liquid filters (B.M. Bemer and Yu.S. Shvintsev) 185
5. Radiation metering of beta-active gases by means of an end-window counter (L.M. Khachatryan and A.D. Kirkin) 195
6. Determination of effluent air contamination due to radioactive gases and aerosols (S. Poryvov, B.M. Bemer and Yu. Shvintsev) 202
7. Measurement of the concentration of radon in the air (V.I. Kislov and V.Y. Zolotarev) 211
8. Determination of the concentration of active gases in the air by means of an air valve chamber (K.M. Bogdanov, M.I. Shvintsev and Yu.M. Shukhenberg) 213
10. Determination of concentration of beta-active gases in the air with the aid of a cylindrical counter placed in a chamber of fixed volume (V.Y. Zolotarev) 215

Recommended literature

Ch. VI. Methods of Measuring the Level of Contamination of Surfaces

1. Instruments for measuring the maximum permissible level of contamination of surfaces by active substances (Yu.M. Shukhenberg) 219
2. Calibration of instruments for measuring the contamination of surfaces by active substances (Yu.M. Shukhenberg) 225
3. Measuring the contamination of fixed surfaces (furniture, equipment in installations) (Yu.M. Shukhenberg) 236
4. Checking special clothing for radioactive contamination (B.M. Bemer and M. Barzovitskiy) 245
5. Determining the radioactive contamination of the hands and body (Yu.M. Shukhenberg) 252
6. Determining the radioactive contamination of surfaces by the smear method (B.M. Bemer, Yu. Shvintsev and E. Opolova) 256

Ch. VII. Methods of Measuring External Doses of X and Gamma Radiation (U.Ye. Margulis and B.M. Bemer)

1. Organization of dosimetric monitoring 279
2. Calibration of dosimeters 283

27

KORSHUNOV, V.I., kand.tekhn.nauk; SEMENOV, B.M., inzh.

Fluidized suspensions as heavy medium for gravity coal preparation.
Ugol' 36 no.1:52-54 Ja '61. (MIRA 14:1)

1. Institut goryuchikh iskopayemykh AN SSSR.
(Fluidization) (Coal preparation)

SEMENOV, B.M.

Expertise on sexual maturity in male adolescents. Sud.-med.
ekspert. 7 no.4:51-52 O-D '64 (MIRA 18:1)

1. Kafedra sudebnoy meditsiny (zav. - prof. V.M. Smol'yaninov)
II Moskovskogo meditsinskogo instituta imeni N.P. Pirogova i
Moskovskoye gorodskoye byuro sudebnoy meditsinskoy ekspertizy
(nachal'nik L.S. Velisheva).

S/081/62/000/001/053/067
B101/B110

AUTHOR: Semenov, B.N.

TITLE: Rational method for adapting diesel engines to liquified gases (A suggestion)

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 1, 1962, 446, abstract 1M154 (Gaz. prom-st', no. 6, 1961, 43-45)

TEXT: Experimental investigations carried out at the Tsentral'nyy n.-i. dizel'nyy in-t (Central Scientific Research Diesel Institute) showed the possibility of adapting diesel engines to liquified gas, which in liquid phase was sprayed immediately into the engine cylinder. This method does not require essential alterations of commercial diesel engines and does not deteriorate their performance. It allows to maintain a high degree of compression and also the power and efficiency of the engine, achieving a high degree of unification between such a gas engine and the commercial diesel engine. Liquified gas may be used with addition of 5-6% diesel fuel for lubrication of precision parts of the combustion

Card 1/2

SEMENOV, B.N.

Using liquefied gases for engines with compression ignition.

Avt.prom. 27 no.8:6-8 Ag '61.

(MIRA 14:10)

1. TSentral'nyy nauchno-issledovatel'skiy dizel'nyy institut.
(Motor vehicles---Engines (Compressed gas))

SEMENOV, B. N.

Cand. Tech. Sci.

Dissertation: "Basic Principles for Selecting the Equipment of
Construction Enterprises."

16 May 49

Moscow Order of the Labor Red Banner Engineering Construction Inst

imeni V. V. Kuybyshev

SO Vecheryaya Moskva
Sum 71

SEMENOV, B.N., starshiy nauchnyy sotrudnik; KAZARINOV, V.M., starshiy
nauchnyy sotrudnik

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